

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD38 antigen is a 45 kDa single-chain glycoprotein. It is an integral membrane protein with a long extracellular C-terminal domain, a single membrane-spanning region and a short N-terminal cytoplasmic tail (1, 2). The CD38 antigen is expressed on a variety of hematopoietic cells, and its distribution depends on the state of the cell differentiation and the cell activation. In adults, the CD38 molecule is expressed on earlier stage of B lymphocyte ontogeny, lost during maturation and re-expressed upon terminal differentiation to plasma cells. This molecule is also strongly expressed on thymocytes, but is found at low density on resting T lymphocytes (1). It is expressed on the majority of resting NK cells and monocytes, and is also found on platelets (3), and red blood cells (4).

The T16 monoclonal antibody was assigned to the CD38 cluster of differentiation at the 3rd International Workshop on Human Leukocyte Differentiation Antigens in Oxford, UK, in 1986 (5).

REAGENT

IOTest CD38-PE Conjugated Antibody
PN IM1832U – 2 mL Liquid – 20 µL/test*

Clone	T16
Hybridoma	SP2/0 x Balb/c
Immunogen	PHA-activated PBL
Ig. Chain	IgG1
Species	Mouse
Source	Ascites fluid
Purification	Protein A affinity chromatography
Conjugation	PE (Phycoerythrin)
Molar Ratio	PE / Ig: 0.5 – 1.5
Fluorescence	Excites at 486 – 580 nm Emits at 568 – 590 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline (PBS: 0.008 M sodium phosphate, 0.15 M sodium chloride, pH 7.2), with 0.1% sodium azide (NaN₃) as preservative, and 2 mg/mL bovine serum albumin (BSA).

STATEMENTS OF WARNING

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use reagent beyond the expiration date on the vial label.
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagent or erroneous results may occur.
7. Use Good Laboratory Practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable to the expiration date printed on the vial label when stored at 2 – 8°C in the dark. Do not freeze.

REAGENT PREPARATION

No preparation is necessary. This reagent is used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. Mehta, K., Shahid, U., Malavasi, F., "Human CD38, a cell-surface protein with multiple functions", 1996, FASEB J., 10, 1408-1417.
2. Malavasi, F., Funaro, Roggero, Horenstein, A., Calosso, L., Mehta, K., "Human CD38: a glycoprotein in search of a function", 1994, Immunol. Today, 3, 15, 95-97.

3. Ramaschi, G., Torti, M., Festetics, E.T., Sinigaglia, F., Malavasi, F., Balduini, C., "Expression of cyclic ADP-Ribose-synthetizing CD38 molecule on human platelet membrane", 1996, Blood, 6, 87, 2308-2313.
4. Zocchi, E., Franco, L., Guida, L., Benatti, U., Bargellesi, A., Malavasi, F., Lee, H.C., DeFlora, A., "A single protein immunologically identified as CD38 display NAD⁺ Glycohydrolase, ADP⁺ Ribosyl Cyclase and cyclic ADP-Ribose Hydrolase activities at the outer surface erythrocytes", 1993, Biochem. Biophys. Res. Com., 3, 196, 1459-1465.
5. Ling, N.R., MacLennan, I.C.M., Mason, D.Y., "B-cell and plasma cell antigens: new and previously defined clusters", 1987, Leucocyte Typing III, White Cell Differentiation Antigens, McMichael A.J., et al., Eds., Oxford University Press, 302-335.

TRADEMARKS AND PATENTS

The Beckman Coulter logo and IOTest are trademarks of Beckman Coulter Inc.

MANUFACTURED BY:

Immunotech SAS,
A Beckman Coulter Company
130, avenue de Lattre de Tassigny, B.P. 177
13276 Marseille Cedex 9, France

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

Printed in France
Made in France

©2008 Beckman Coulter, Inc
All rights reserved

* 20 µL is the quantity of product sufficient to stain 5 x 10⁵ cells in a standard immunofluorescence assay